



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,603	08/09/2001	Manfred Bochmann	01435.0120	5253

7590 06/02/2003

Finnegan, Henderson, Farabow,
Garrett & Dunner, L.L.P.
1300 I Street, N.W.
Washington, DC 20005-3315

EXAMINER

RABAGO, ROBERTO

ART UNIT PAPER NUMBER

1713

DATE MAILED: 06/02/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

146

Office Action Summary

Application No.

09/924,603

Applicant(s)

BOCHMANN ET AL.

Examiner

Rob Rábago

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 34-51 is/are pending in the application.
- 4a) Of the above claim(s) 34-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 39-48 is/are rejected.
- 7) ☒ Claim(s) 49-51 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of the catalyst claims of Group II in Paper No. 6 is acknowledged.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 39, 43 and 45-47 are rejected under 35 U.S.C. 102(e) as being anticipated by Xu et al. (US 6,133,387).

The reference shows in Examples 6-11 numerous iron, cobalt and nickel catalyst structures within the scope of the claimed generic structure. Activation with aluminoxane or tris(pfp)boron compounds is shown in polymerization Examples 13-26.

5. Claims 39-42 and 45-47 are rejected under 35 U.S.C. 102(e) as being anticipated by Xu et al. (US 6,239,237).

The catalyst structure of instant claims 39, 45 and 46 in combination with aluminoxane or organoboron activators is disclosed in numerous working examples 15-23. For disclosure of the catalyst structures of claims 40-42, the patented claims are relied upon. Patented claim 1 discloses an olefin polymerization process comprising the use of a transition metal catalyst which generically includes the instantly claimed catalyst structures. However, patented claims 4 and 7-9 focus on the subgenus claimed instantly, wherein claim 4 discloses each R to be C₁-C₁₀ alkyl or aryl (among a field of three choices for this substituent), claim 7 discloses R¹ and R² to be 2,6-diisopropylphenyl (among a field of two choices for this substituent), claim 8 requires Y and Z to be phosphorus, and claim 9 requires M to be Fe, Co, Ni or Pd. The remaining claims 10-15 disclose aluminoxane and organoboron activators. Regarding instant claim 46, the reference definition of "activatable ligand" (i.e., reference element L which corresponds to claimed element X) may be found at col. 4, lines 30-33, wherein L is stated to be "most preferably a halide (Cl or Br)".

Applicants' priority document has been reviewed and found to contain no disclosure of the heterocyclic group comprising sulfur, oxygen or phosphorus which

forms the bridge between the two phosphinimine groups as recited in the reference disclosure relied upon, and therefore the instant application is not entitled to the filing date of the foreign priority document for the catalyst species disclosed in the reference.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 40-42, 44 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xu et al. (US 6,133,387).

The reference discloses at col. 2-4 organometallic complexes for the polymerization of olefins which encompass the structures of the instant claims. Although the reference shows in Examples 6-26 numerous iron, cobalt, palladium and nickel structures, activation of such compounds with aluminoxane or tris(pfp)boron compounds, and olefin polymerization therewith, the exemplified catalysts differ from those claimed. Specifically, the example species do not show:

(a) reference substituents R^6 - R^7 to be substituted or unsubstituted phenyl as required in claim 40, and substituted phenyl as required in claim 41.

(b) reference substituents R^2 - R^5 to be phenyl, alkyl or cycloalkyl as required in claims 42 and 44.

Art Unit: 1713

(c) the Lewis base as required in claim 48.

However, all of these limitations are suggested in the reference. The substituents R^6 - R^7 are suggested to be "a phenyl radical which is unsubstituted or substituted by up to five hydrocarbyl radicals" at col. 4, lines 32-36; R^2 - R^5 are suggested to be phenyl at col. 4, lines 24-27; and use of a neutral Lewis base is suggested in the structure at the line 10 of col. 3, wherein L^1 is stated to be a neutral monodentate ligand. One of ordinary skill in the art would be motivated to use these embodiments because patentee has suggested them as useful alternative structures for the catalytic polymerization of olefins. Further regarding the limitation of instant claim 41 requiring that "at least one of R^1 - R^{10} contains two or more carbon atoms", those of ordinary skill would immediately envisage the reference suggestion of "hydrocarbyl radicals" to include substituents which have at least two carbon atoms.

Allowable Subject Matter

8. Claims 49-51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The references of record have not disclosed or reasonably suggested the use of a support with the disclosed catalysts as required in claims 49-50. Although the use of supports is common in the catalytic polymerization art, the specific catalytic or polymerization behavior of the instantly claimed catalyst structure disposed on a support could not be predicted *a priori*, and therefore would be, at best, an embodiment which would be "obvious to try", which cannot form the basis of

Art Unit: 1713

a rejection under 35 USC 103(a). The references of record have not disclosed or reasonably suggested a catalyst composition including both the disclosed catalyst and a conventional catalyst as required in claim 51.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rob Rábago whose telephone number is (703) 308-4347. The examiner can normally be reached on Monday - Friday from 7:30 am - 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached at (703) 308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Rob Rábago
Examiner
Art Unit 1713

RR *RR*
May 27, 2003

